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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,568	10/31/2003	Lawrence W. Osterman	MS306051.1/MSFTP506US	1108
27195	7590	03/14/2007	EXAMINER	
AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			PHAN, TUANKHANH D	
		ART UNIT	PAPER NUMBER	
		2109		
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/14/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/698,568 Examiner TuanKhanh Phan	OSTERMAN, LAWRENCE W. Art Unit 2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10/31/2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-36 is/are rejected.
- 7) Claim(s) 6 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 October 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/21/2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Drawings

1. Figures 3A, 3B, 3D, and 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 6 is objected to because of the following informalities: "... the response in unicast **form** the object"; it should be "**from**". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(a) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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3. **Claims 1-10, 12-20, 22, 25-30, 32-34, and 36 are rejected under 35**

U.S.C. 102(a) as being anticipated by Jeong et al. ("Service Discovery Based on Multicast DNS in Ipv8 Mobile Ad-hoc Networks"), hereinafter referred to as "Jeong et al."

Regarding **claim 1**, Jeong et al. disclose a system that detects presence of an object (p. 1763, col. 2, ¶ 2; [node, device]), comprising: a transmit component that sends a multicast-type query as a unicast query to the object (p. 1763, col. 2, ¶ 2), the object having a timeout period associated therewith (p. 1763, col. 2, ¶ 2); and a presence component that monitors a response to the unicast message (p. 1763, col. 2, ¶ 2), and if a response is not received, the object is not inactive (p. 1763, col. 2, ¶ 2).

Regarding **claim 2**, see the disclosures of Jeong et al. as discussed in claim 1 above. Jeong et al. disclose the object is at least one of a wired device (p. 1763, col. 2, ¶ 2), a wireless device (Figure 1), and a service (p. 1763, col. 1, ¶ 4).

Regarding **claim 3**, Jeong et al. disclose the system of claim 1 above, and the multicast-type query is transmitted in unicast at least once before timeout expires (p. 1763, col. 2, ¶ 2).

Regarding **claim 4**, Jeong et al. disclose the system of claim 1 above, a plurality of multicast-type queries are transmitted in unicast to the object to control the object (p. 1763, col. 2, ¶ 2; [LLMNR]).

Regarding **claim 5**, Jeong et al. disclose the system of claims 1 and 4 above, the plurality of multicast-type queries signal the object to stay connected (p. 1763, col. 2, ¶ 2).

Regarding **claim 6**, Jeong et al. disclose the system of claim 1, at least one of the transmit component and the presence component (p. 1763, col. 2, ¶ 2) is part of client application that transmits the multicast-type query in unicast and receives the response in unicast from the object (p. 1763, col. 2, ¶ 2).

Regarding **claim 7**, Jeong et al. disclose the system of claim 1; the object is disposed on a network remote from the transmitted and presence components (Figure 1; p. 1763, col. 2, ¶ 2).

Regarding **claim 8**, Jeong et al. disclose the system of claim 1; the unicast response is stored at the system-end (p. 1763, col. 2, ¶ 2).

Regarding **claim 9**, Jeong et al. disclose the system of claim 1, the multicast-type query is directed to at least one of the object[s] (p. 1763, col. 2, ¶ 2), an embedded device of the object (p. 1763, col. 2, ¶ 2), and an embedded service of the object (p. 1763, col. 2, ¶ 2).

Regarding **claim 10**, Jeong et al. disclose the system of claim 1, the multicast-type query is sent a predetermined number of times before the object is determined to be off-line (p. 1763, col. 2, ¶ 2; [e.g.: 3 times]).

Regarding **claim 12**, Jeong et al. disclose the system of claim 1, the transmit component transmits a plurality of unique multicast-type query in unicast to respective plurality of the objects (p. 1763, col. 2, ¶ 1 & ¶ 2).

Regarding **claim 13**, Jeong et al. disclose the system of claim 1, the transmit component transmits a first multicast-type query in unicast to an intermediate device to

determine its status before transmitting the multicast-type query in unicast to the object (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1764, col. 1, ¶ 1; p. 1766, col. 1).

Regarding **claim 14**, Jeong et al. disclose the system of claim 1, the multicast-type query is transmitted in unicast to the object from a first client application (p. 1763, col. 2, ¶ 1 & ¶ 2), the response to which indicates a status of the object (p. 1763, col. 2, ¶ 1 & ¶ 2), and the status of which is announced by the first client application to a second client application (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1766, col. 1; Figure 11).

Regarding **claims 15 and 16**, Jeong et al. disclose the system of claim 1 having a computer system and computer readable medium storing and carrying out computer executable instructions (p. 1763, col. 1 & 2, ¶ 2; p. 1767, col. 2, ¶ 1 & 2 [base station, network, server]).

Regarding **claim 17**, Jeong et al. teach a system that discovers presence of an object (p. 1763, col. 2, ¶ 2), comprising: a client application that seeks status of the object; (p. 1763, col. 2, ¶ 2; p. 1766, col. 1) and a discovery component associated with the client application that facilitates discovery of the object via a discovery protocol (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1766, col. 1), the protocol comprising: transmitting a multicast-type message as a unicast message to the object (p. 1763, col. 2, ¶ 2), the object having a timeout period associated therewith (p. 1763, col. 2, ¶ 2); and checking for receipt of a response from the object to determine the status thereof (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1766, col. 1).

Regarding **claim 18**, Jeong et al. teach the system of claim 17, the client application signals the discovery component to initiate discovery of the object by transmitting the multicast-type message in unicast to the object (p. 1763, col. 2, ¶ 2).

Regarding **claim 19**, Jeong et al. teach the system of claim 17, the discovery component is part of the client application (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1766, col. 1; Figure 11).

Regarding **claim 20**, Jeong et al. teach the system of claim 17, the client application is a master browser seeking the status of a plurality of other browsers (p. 1763, col. 2, ¶ 1 & ¶ 2; p. 1766, col. 1; Figures 11 & 12).

Regarding **claim 22**, Jeong et al. teach the system of claim 17, the discovery protocol using a network protocol (p. 1763, col. 1 & 2; p. 1767, col. 2).

Regarding **claim 25**, Jeong et al. teach the system of claim 17, wherein receipt of a response in unicast indicate that the object is on-line and non-receipt of a response indicates that the object is off-line (p. 1763, col. 2, ¶ 2).

Regarding **claim 26**, Jeong et al. teach a method of determining the presence of an object on a network comprising: transmitting a multicast-type message in unicast to the object on demand (p. 1763, col. 2, ¶ 2; p. 1766, col. 1); checking for receipt of a response from the object to determine the status of the object (p. 1763, col. 2, ¶ 2); and determining the status of the object based upon receipt or non-receipt of the response (p. 1763, col. 2, ¶ 2).

Regarding **claim 27**, Jeong et al. teach the method of claim 26, further comprising delaying determination of the status of the object until a predetermined

number of additional multicast-type messages have been transmitted to the object in unicast (p. 1763, col. 2, ¶ 2).

Regarding **claim 28**, Jeong et al. teach the method of claim 26, further comprising initiating discovery of an intermediary object in response to determining initially that the object is off-line (p. 1763, col. 1 & 2; p. 1767, col. 2).

Regarding **claim 29**, Jeong et al. teach the method of claim 26, further comprising automatically initiating discovery of a redundant object in response to determining that the object is off-line (p. 1763, col. 1 & 2; p. 1767, col. 2).

Regarding **claim 30**, Jeong et al. teach the method of claim 26; the object is one of a plurality of interdependent objects such that failure of the object results in failure of the remaining plurality of interdependent objects (Figures 9, 11, 12; p. 1764, col. 1; p. 1766, col. 1).

Regarding **claim 32**, Jeong et al. teach the method of claim 26, further comprising signaling the object to stay on-line using at least two of the multicast-type messages sent in unicast to the object (Figure 11; p. 1763, col. 2, p. 1765).

Regarding **claim 33**, Jeong et al. teach a system that determines the presence of an object on a network (p. 1763, col. 1&2; p. 1766, col. 2), means for monitoring a timeout associated with the object (p. 1763, col. 1&2; p. 1766, col. 2); means for transmitting a multicast-type message in unicast to the object on demand before the timeout expires (p. 1763, col. 1&2; p. 1766, col. 2); means for checking for receipt of a response from the object to determine the status of the object (p. 1763, col. 1&2; p.

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1766, col. 2); and means for determining the status of the object based upon receipt or non-receipt of the response (p. 1763, col. 1&2; p. 1766, col. 2).

Regarding **claim 34**, Jeong et al. teach a system of claim 33, further comprising means for caching the status of the object for access by a client application (p. 1763, col. 2; p. 1765 col. 1).

Regarding **claim 36**, Jeong et al. teach a computer-readable medium (p. 1763; p. 1765; p. 1766 [network, server, base station]) having computer-executable instructions for performing a method for determining the presence of an object on a network (p. 1763, col. 2, ¶ 2), the method comprising: transmitting a multicast-type message in unicast to the object on demand (p. 1763; p. 1765; p. 1766); checking for receipt of a response from the object to determine the status of the object (p. 1763, col. 2); and determining the status of the object based upon receipt or non-receipt of the response (p. 1763, col. 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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5. **Claims 11 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al. as applied to claims 1 and 17 above, and further in view of Bhatti (US Pub. No. 2003/0140344 A1).

Regarding **claim 11**, Jeong et al. lack, from claim 11 above, of the object is compatible with a plug-and-play architecture. Bhatti teaches a Universal Plug-and-Play (UPnP) architecture that is compatible with network interfaces (abstract; ¶ 29; Figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Bhatti into the disclosures by Jeong et al. to enhance the effectiveness of nodes collaboration in a network.

Regarding **claim 21**, Jeong et al. lack of, from claim 17 above, the discovery protocol is based upon UPnP architecture that uses at least one of a simple service discovery protocol and a general event notification architecture protocol. Bhatti teaches node recognition includes UPnP architecture (abstract; ¶ 29; Figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Bhatti into the disclosures by Jeong et al. to have the system to be more interoperable in a network environment.

6. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al. as applied to claims 17 and 22 above, and further in view of Shrinivasan et al. (U.S. Pub. No. 2002/0174237).

Regarding **claim 23**, while Jeong et al. disclose claims 17 and 22 as discussed above comprises at least TCP/IP and UDP, Jeong et al. lack of network protocol comprises at least of NetBEUI, and XML. Shrinivasan et al. teach a system of nodes

contact information recognition using TCP/IP, HTTP, NetBUI, and XML (¶ 23). Further, networking transfer protocol using TCP/IP, HTTP, NetBUI, and XML is inherent in the networking art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Shrinivasan et al. into the disclosures by Jeong et al. to make the system to be more compatible with different network transfer protocol environments.

7. **Claims 24, 31, and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al. as applied to claims 17 and 26 above, and further in view of Devine et al. (US Pub. No. 2002/009/5399).

Regarding **claim 24**, Jeong et al. disclose claim 17 but lack of a predetermined hierarchy. Devine et al. further teach a network having devices and services with a predetermined hierarchy order (¶ 345).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Devine et al. into the disclosures by Jeong et al. so all nodes in a network function in a predictable manner, at it provides a better network management.

Regarding **claim 31**, Jeong et al. disclose claim 17 and 26; however Jeong et al. do not provide a hierarchy fashion. Devine et al. teach a network having devices and services with a hierarchy order (¶ 345). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Devine et al. into the disclosures by Jeong et al., for a networking queue of priority is carrying

out per network management settings. It also is easier to figure out the network bandwidth usage and timing.

Regarding **claim 35**, Jeong et al. disclose claim 33, but Jeong et al. lack comprising means for determining a network condition that causes the means for transmitting to transmit the multicast-type message in unicast more frequently based upon worsening network conditions, and to relax the frequency of transmission when the network resume more normal operation. Devine et al. teach network redundancy in network services and devices (¶ 083 and 375). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Devine et al. into the disclosures by Jeong et al. to avoid reconnections and network connection overheads when any nodes get disconnected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Zintel et al. US Patent No. 6,725,281. Apr. 20, 2004 (Filed Nov. 2, 1999).
"Synchronization of Controlled Device State Using State Table and Eventing in Data-Driven Remote Device Control Model."

Miller et al. US Patent No. 6,873,627. Mar. 29, 2005. "System and Method for Sending Packets Over a Computer Network".

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuanKhanh Phan whose telephone number is 571-270-3047. The examiner can normally be reached on Mon to Fri, 9:00am to 5:00pm EST, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

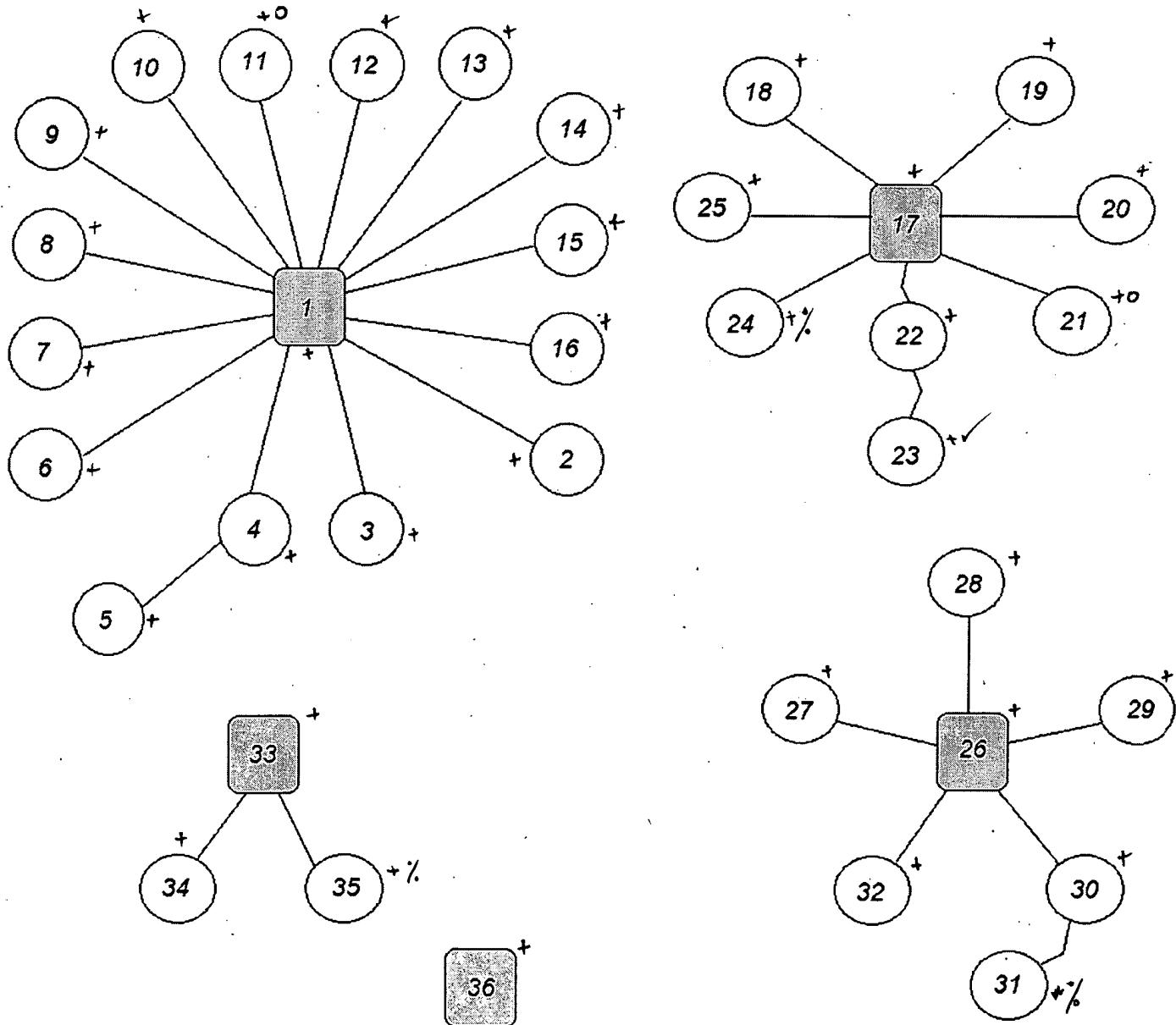
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tkp



PATRICK ASSOUAD
SUPERVISORY PATENT EXAMINER

App. No. 10/698,568
CLAIM TREES



+ : 102(a) Jeong et al.

+^o : 103 Jeong et al. & Bhatti

+^v : 103 Jeong et al. & Shrinivasan et al.

+% : 103 Jeong et al. & Devine et al.